

Remarks

The Office Action mailed January 29, 2007 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-17 are now pending in this application. Claims 18-48 have been canceled. Claims 1-16 and 18 stand rejected. Claims 6, 7, and 17 are objected to.

Applicant thanks the Examiner for the telephonic interview on May 4, 2007. During the interview the claim language of the present application was discussed. The Examiner agreed that the proposed claim language was sufficient to overcome the prior art, and in particular, the Han, Brugger, and Koivusalo references.

Applicant respectfully traverses the objection to Claims 6, 7, and 17. Applicant has amended Claims 6, 7, and 17 to address the issues raised in the Office Action. Accordingly, Applicants respectfully request that the objection to Claims 6, 7, and 17 be withdrawn.

The rejection of Claims 1-18 under 35 U.S.C. §112, second paragraph, as being indefinite is respectfully traversed.

Claim 18 has been canceled and Claim 1 has been amended. Applicant submits that Claim 1, as amended, particularly points out and claims the subject matter that Applicant regards as the invention.

Claims 2-7 depend from independent Claim 1. When the recitations of Claims 2-7 are considered in combination with the recitations of Claim 1, Applicant submits that Claims 2-7 likewise particularly point out and claim the subject matter that Applicant regards as the invention.

Claim 8 has been amended. Applicant submits that Claim 8, as amended, particularly points out and claims the subject matter that Applicant regards as the invention.

Claims 9-17 depend from independent Claim 8. When the recitations of Claims 9-17 are considered in combination with the recitations of Claim 8, Applicant submits that Claims

9-17 likewise particularly point out and claim the subject matter that Applicant regards as the invention.

For at least the reasons set forth above Applicant respectfully requests that the Section 112 rejection of Claims 1-18 be withdrawn.

The rejection of Claims 1-16 and 18 under 35 U.S.C. § 103(c) as being unpatentable over Han et al. (Proc. Natl. Acad. Sci. USA, 1994) (hereinafter referred to as “Han”) or Brugger et al. (Proc. Natl. Acad. Sci. USA, 1997) (hereinafter referred to as “Brugger”) in view of Koivusalo et al. (J. Lipid Res., 2001) (hereinafter referred to as “Koivusalo”) is respectfully traversed.

Han is cited for disclosing electrospray ionization mass spectroscopic analysis of human erythrocyte plasma membrane phospholipids involving linear regression analysis for correcting different instrumental efficiencies for molecular species. Brugger is cited for teaching quantitative analysis of biological membrane lipids at the low picomole level by nano-electrospray ionization tandem mass spectrometry. Koivusalo is cited for teaching quantitative determination of phospholipid compositions by ESI-MS.

Claim 18 has been canceled.

Applicant has amended Claim 1 to recite a method for the determination of triglyceride individual molecular species composition of matter in a biological sample, wherein the method comprises “subjecting the biological sample to lipid extraction to obtain a lipid extract...subjecting the lipid extract to two dimensional electrospray ionization tandem mass spectrometry (ESI/MS/MS) to generate a two dimensional plot representing molecular ions of the lipid extract on an x-axis and neutral loss scans of fatty acids of the lipid extract on a y-axis...comparing peak heights for the molecular ions with that for an internal standard to identify and/or quantify the triglyceride molecular species.”

Claim 1 is submitted to be patentable over Han or Brugger in view of Koivusalo. Specifically, none of Han, Brugger, or Koivusalo describe or suggest generating a two dimensional plot representing molecular ions of a lipid extract on an x-axis and neutral loss

scans of fatty acids of the lipid extract on a y-axis, and comparing peak heights for the molecular ions with that for an internal standard to identify and/or quantify a triglyceride molecular species.

Claims 2-7 depend from independent Claim 1. When the recitations of Claims 2-7 are considered in combination with the recitations of Claim 1, Applicant submits that Claims 2-7 likewise are patentable over Han or Brugger in view of Koivusalo.

Applicant has amended Claim 8 to recite a method for the determination of triglyceride individual molecular species composition of matter directly from a lipid extract of a biological sample, wherein the method comprises “subjecting said lipid extract to electrospray ionization tandem mass spectrometry (ESI/MS/MS) to generate a two dimensional plot of molecular ions of the lipid extract versus neutral loss scans of fatty acids of the lipid extract...comparing peak heights for the molecular ions with that for an internal standard to identify and/or quantify the triglyceride molecular species.”

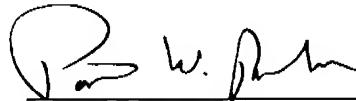
Claim 8 is submitted to be patentable over Han or Brugger in view of Koivusalo. Specifically, none of Han, Brugger, or Koivusalo describe or suggest generating a two dimensional plot of molecular ions of a lipid extract versus neutral loss scans of fatty acids of the lipid extract, and comparing peak heights for the molecular ions with that for an internal standard to identify and/or quantify a triglyceride molecular species.

Claims 9-16 depend from independent Claim 8. When the recitations of Claims 9-16 are considered in combination with the recitations of Claim 8, Applicant submits that Claims 9-16 likewise are patentable over Han or Brugger in view of Koivusalo.

For at least the reasons set forth above, Applicant respectfully requests that the Section 103 rejection of Claims 1-16 and 18 be withdrawn.

In view of the foregoing amendments and remarks, all claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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